

PTO/PCT Rec'd 0 MAY 2002



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*JH*

## SEQUENCE LISTING

<110> Feussner, Ivo  
Hornung, Ellen  
Fritzsche, Kathrin  
Peitzsch, Nicola

<120> Fatty acid desaturase gene from plants

<130> 0050/50669

<140> US 09/721,756

<150> PCT/EP/00/08222

<151> 2000-08-23

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Arg Met Ser Asp Pro Ser Glu Gly Lys Asn Ile Leu Glu Arg Val Pro  
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gtc gat cca ccg ttc acg tta agc gat ctg aag aaa gcg att cct acc 152  
Val Asp Pro Pro Phe Thr Leu Ser Asp Leu Lys Lys Ala Ile Pro Thr  
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His Cys Phe Glu Arg Ser Val Ile Arg Ser Ser Tyr Tyr Val Val His  
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gat ctc att gtt gcc tat gtc ttc tac tac ctt gca aac acg tat atc 248  
Asp Leu Ile Val Ala Tyr Val Phe Tyr Tyr Leu Ala Asn Thr Tyr Ile  
55 60 65

cct ctt att cct aca cct ctg gct tac cta gca tgg ccc gtt tac tgg 296  
Pro Leu Ile Pro Thr Pro Leu Ala Tyr Leu Ala Trp Pro Val Tyr Trp  
70 75 80 85

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Phe	Cys	Gln	Ala	Ser	Ile	Leu	Thr	Gly	Leu	Trp	Val	Ile	Gly	His	Glu	90	95	100
tgt	ggc	cac	cat	gca	ttt	agc	gac	tac	cag	ttg	att	gat	gac	att	gtt			392
Cys	Gly	His	His	Ala	Phe	Ser	Asp	Tyr	Gln	Leu	Ile	Asp	Asp	Ile	Val	105	110	115
gga	tcc	gtg	ctc	cat	tcg	gct	ctc	ctc	acc	ccg	tat	ttc	tct	tgg	aaa			440
Gly	Phe	Val	Leu	His	Ser	Ala	Leu	Leu	Thr	Pro	Tyr	Phe	Ser	Trp	Lys	120	125	130
tat	agc	cac	agg	aat	cac	cac	gcc	aac	aca	aat	tca	ctc	gat	aac	gat			488
Tyr	Ser	His	Arg	Asn	His	His	Ala	Asn	Thr	Asn	Ser	Leu	Asp	Asn	Asp	135	140	145
gaa	gtt	tac	att	cct	aaa	cgt	aag	tcg	aag	gtc	aag	att	tat	tcc	aaa			536
Glu	Val	Tyr	Ile	Pro	Lys	Arg	Lys	Ser	Lys	Val	Lys	Ile	Tyr	Ser	Lys	150	155	160
ctt	ctt	aac	aat	cca	ccc	ggg	cga	gtg	ttc	act	ttg	gtg	ttt	cgg	ttg			584
Leu	Leu	Asn	Asn	Pro	Pro	Gly	Arg	Val	Phe	Thr	Leu	Val	Phe	Arg	Leu	170	175	180
act	tta	gga	ttt	ccg	tta	tac	ctc	tta	act	aat	atc	tcg	ggc	aag	aaa			632
Thr	Leu	Gly	Phe	Pro	Leu	Tyr	Leu	Leu	Thr	Asn	Ile	Ser	Gly	Lys	Lys	185	190	195
tac	ggg	agg	ttt	gcc	aac	cac	ttt	gat	ccc	atg	agt	cca	att	ttc	aac			680
Tyr	Gly	Arg	Phe	Ala	Asn	His	Phe	Asp	Pro	Met	Ser	Pro	Ile	Phe	Asn	200	205	210
gat	cgt	gaa	cgc	gtt	caa	gtt	ttg	cta	tcc	gat	ttc	ggt	ctt	ctc	gct			728
Asp	Arg	Glu	Arg	Val	Gln	Val	Leu	Leu	Ser	Asp	Phe	Gly	Leu	Leu	Ala	215	220	225
gta	ttt	tat	gca	atc	aag	ctt	ctt	gta	gca	gca	aaa	ggg	gca	gct	tgg			776
Val	Phe	Tyr	Ala	Ile	Lys	Leu	Leu	Val	Ala	Ala	Lys	Gly	Ala	Ala	Trp	230	235	240
gta	atc	aac	atg	tac	gca	att	cca	gta	cta	ggt	gta	agc	gtg	ttc	ttc			824
Val	Ile	Asn	Met	Tyr	Ala	Ile	Pro	Val	Leu	Gly	Val	Ser	Val	Phe	Phe	250	255	260
gtt	ttg	atc	aca	tat	ttg	cac	cac	cat	ctc	tca	ctc	cct	cat	tat				872
Val	Leu	Ile	Thr	Tyr	Leu	His	His	Thr	His	Leu	Ser	Leu	Pro	His	Tyr	265	270	275
gat	tca	acc	gaa	tgg	aac	tgg	atc	aaa	ggc	gcc	tta	tca	aca	atc	gat			920
Asp	Ser	Thr	Glu	Trp	Asn	Trp	Ile	Lys	Gly	Ala	Leu	Ser	Thr	Ile	Asp	280	285	290
agg	gat	ttc	ggg	ttc	ctg	aat	cg	gtt	ttc	cac	gac	gtt	aca	cac	act			968
Arg	Asp	Phe	Gly	Phe	Leu	Asn	Arg	Val	Phe	His	Asp	Val	Thr	His	Thr	295	300	305
cac	gtc	ttg	cat	cat	ttg	atc	tca	tac	att	cca	cat	tat	cat	gca	aag			1016
His	Val	Leu	His	His	Leu	Ile	Ser	Tyr	Ile	Pro	His	Tyr	His	Ala	Lys	310	315	320

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gac agg act cca att ttc aaa gca atg tat aga gag gct aag gaa tgc	1112
Asp Arg Thr Pro Ile Phe Lys Ala Met Tyr Arg Glu Ala Lys Glu Cys	
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atc tac atc gag ccc gat gag gat agc gag cac aaa ggt gtg ttc tgg	1160
Ile Tyr Ile Glu Pro Asp Glu Asp Ser Glu His Lys Gly Val Phe Trp	
360 365 370	
tac cac aag atg taa tcaaaaagggt gtatgtcaat gcaattgtat gcttaattaa	1215
Tyr His Lys Met	
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Tyr Tyr Val Val His Asp Leu Ile Val Ala Tyr Val Phe Tyr Tyr Leu	
50 55 60	
Ala Asn Thr Tyr Ile Pro Leu Ile Pro Thr Pro Leu Ala Tyr Leu Ala	
65 70 75 80	
Trp Pro Val Tyr Trp Phe Cys Gln Ala Ser Ile Leu Thr Gly Leu Trp	
85 90 95	
Val Ile Gly His Glu Cys Gly His His Ala Phe Ser Asp Tyr Gln Leu	
100 105 110	
Ile Asp Asp Ile Val Gly Phe Val Leu His Ser Ala Leu Leu Thr Pro	
115 120 125	
Tyr Phe Ser Trp Lys Tyr Ser His Arg Asn His His Ala Asn Thr Asn	
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Ser Leu Asp Asn Asp Glu Val Tyr Ile Pro Lys Arg Lys Ser Lys Val	
145 150 155 160	

Lys Ile Tyr Ser Lys Leu Leu Asn Asn Pro Pro Gly Arg Val Phe Thr  
 165 170 175  
 Leu Val Phe Arg Leu Thr Leu Gly Phe Pro Leu Tyr Leu Leu Thr Asn  
 180 185 190  
 Ile Ser Gly Lys Lys Tyr Gly Arg Phe Ala Asn His Phe Asp Pro Met  
 195 200 205  
 Ser Pro Ile Phe Asn Asp Arg Glu Arg Val Gln Val Leu Leu Ser Asp  
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 Phe Gly Leu Leu Ala Val Phe Tyr Ala Ile Lys Leu Leu Val Ala Ala  
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 Lys Gly Ala Ala Trp Val Ile Asn Met Tyr Ala Ile Pro Val Leu Gly  
 245 250 255  
 Val Ser Val Phe Phe Val Leu Ile Thr Tyr Leu His His Thr His Leu  
 260 265 270  
 Ser Leu Pro His Tyr Asp Ser Thr Glu Trp Asn Trp Ile Lys Gly Ala  
 275 280 285  
 Leu Ser Thr Ile Asp Arg Asp Phe Gly Phe Leu Asn Arg Val Phe His  
 290 295 300  
 Asp Val Thr His Thr His Val Leu His His Leu Ile Ser Tyr Ile Pro  
 305 310 315 320  
 His Tyr His Ala Lys Glu Ala Arg Asp Ala Ile Lys Pro Val Leu Gly  
 325 330 335  
 Glu Tyr Tyr Lys Ile Asp Arg Thr Pro Ile Phe Lys Ala Met Tyr Arg  
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 Glu Ala Lys Glu Cys Ile Tyr Ile Glu Pro Asp Glu Asp Ser Glu His  
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 Lys Gly Val Phe Trp Tyr His Lys Met  
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